

SUBSTITUTE ABSTRACT

A method for preparing a sol-gel derived SiO_2 having a very fast bioresorption rate where a sol-gel derived SiO_2 is prepared from a sol comprising water, an alkoxide or inorganic silicate and a lower alcohol using a mineral acid or a base as a catalyst and the sol is aged and dried. The method uses a pH from 1.5 to 2.5, a molar ratio of water to the alkoxide or inorganic silicate of 0.5 to 2.5, a molar ratio of alcohol to the alkoxide or inorganic silicate is ≥ 0.5 ; and the sol is either let to gel without induced changes of composition and without forced drying of the sol, or a change of composition is induced; and within a time of ≤ 30 minutes, from the induced change forced drying of the sol is carried out or initiated.